3.10-3.12 Test Review

Name_____ Date _____ Period _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Use the fundamental identities to find the value of the trigonometric function.

1) Find $\cos\theta$ if $\sin\theta = -\frac{12}{13}$ and $\tan\theta > 0$. 1) _____

2) Find $\tan\theta$ if $\cos\theta = \frac{1}{4}$ and $\sin\theta < 0$. 2) _____

Use basic identities to simplify the expression.

3) $\frac{\csc\theta\cot\theta}{\sec\theta}$ 3) _____

4) $\frac{\cos^2\theta}{\sin^2\theta} + \csc\theta\sin\theta$ 4) _____

5) $\frac{\tan\theta}{\sec\theta}$ 5) _____

Simplify the expression.

6) $\sec(-x)\cos(-x)$ 6) _____

7) $\cos x + \sin x \tan x$ 7) _____

8) $\frac{\cos x}{\tan^2 x} - \frac{\cos x}{\sin^2 x}$ 8) _____

9) $\frac{\sec x}{\sin x} - \frac{\cos x}{\sin x}$ 9) _____

Find all solutions in the interval $[0, 2\pi)$.

10) $2 \sin^2 x = \sin x$ 10) _____

11) $4 \sin^2 x - 4 \sin x + 1 = 0$ 11) _____

Find an exact value.

12) $\sin 15°$ 12) _____

13) $\tan 15°$ 13) _____

14) $\cos \frac{\pi}{12}$ 14) _____

15) $\tan \frac{7\pi}{12}$ 15) _____

Write the expression as the sine, cosine, or tangent of an angle.

16) $\cos 133° \cos 58° + \sin 133° \sin 58°$ 16) _____

17) $\sin 8x \cos x - \cos 8x \sin x$ 17) _____

Prove the identity.

18) $\cos 4x = 1 - 2\sin^2 2x$ 18) _____

Rewrite with only sin x and cos x.

19) $\sin 2x - \cos 3x$ 19) _____

Find all solutions to the equation in the interval $[0, 2\pi)$.

20) $\cos 2x - \cos x = 0$ 20) _____

21) $\sin 2x = -\sin x$ 21) _____